

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 March 2004 (04.03.2004)

PCT

(10) International Publication Number
WO 2004/018673 A3

- (51) International Patent Classification⁷: C12N 15/10 (74) Agent: VOSSIUS & PARTNER; Siebertstrasse 4, 81675 Munich (DE).
- (21) International Application Number: PCT/EP2003/009223 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 20 August 2003 (20.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 02018210.1 20 August 2002 (20.08.2002) EP (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): B.R.A.I.N. BIOTECHNOLOGY RESEARCH AND INFORMATION NETWORK AG [DE/DE]; Darmstädter Strasse 34, 64673 Zwingenberg (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): QUAISER, Achim [DE/DE]; Schwarzwaldstrasse 31, 78549 Spaichingen (DE). OCHSENREITER, Torsten [DE/US]; Josephine Bay Paul Center for Comparative, Molecular Biology and Evolution, The Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543 (US). TREUSCH, Alexander, H. [DE/DE]; Ringstrasse 3, 64409 Messel (DE). KLETZIN, Arnulf [DE/DE]; Kittlerstrasse 15, 64268 Darmstadt (DE). SCHLEPER, Christa [DE/DE]; Frankensteinerstrasse 155, 64297 Darmstadt (DE). LORENZ, Patrick [DE/DE]; Nibelungenstrasse 91, 64653 Lorsch (DE). ECK, Jürgen [DE/DE]; Siegfriedstrasse 138, 64646 Heppenheim (DE).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 12 August 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: ISOLATION AND CLONING OF DNA FROM UNCULTIVATED ORGANISMS

(57) **Abstract:** The present invention relates to a device for the isolation and/or purification of nucleic acid molecules suitable to bind and/or inactivate inhibitors of the activity of reagents or enzymes used for DNA manipulation and to separate a plurality of nucleic acid molecules with respect to their size. Moreover, the invention relates to a method for the isolation of a nucleic acid molecule comprising applying a sample to the device of the invention wherein said nucleic acid molecule preferably represents a fraction of the metagenome of a given habitat. Furthermore, the invention relates to a method for the generation of at least one gene library comprising nucleic acid molecules isolated by the method of the invention and to a nucleic acid molecule isolated by the method of the invention.

WO 2004/018673 A3